

## REMARKS

The following remarks are responsive to the Office Action mailed August 23, 2006, which was made final. Applicants respectfully request reconsideration of the present application. Claims 1-59 were examined. No claims have been amended, cancelled or added. Claims 1-59 are presented for examination.

### **Claim Rejections under 35 U.S.C. §103(a)**

#### Claims 1-13, 17-22, 28-35 and 57-59

The Examiner rejected claims 1-13, 17-22, 28-35 and 57-59 as being unpatentable over U.S. Patent No. 6,067,383 issued to Taniguchi, et al. ("Taniguchi") in view of U.S. Patent No. 6,157, 746 to Sodagar, et al. ("Sodagar").

In a Response filed on June 30, 2006, Applicants argued that the combination of Taniguchi and Sodagar failed to teach or suggest "organizing the bands into a plurality of layers suitable for progressive transmission to a target device, wherein a layer from the plurality of layers includes a subset of bitplanes from a first band from the separate bands and a subset of bitplanes from a second band from the separate bands," as recited in claim 1.

With respect to this limitation, the Examiner states:

Therefore wavelet coefficients corresponding to different bands have been read as plurality of layers, which are, coded as embedded bitstreams.... Thus the coefficients generated from wavelet bands (as in Sodagar) are similar to the layers of a single image and the bitstreams corresponding to each band correspond to a subset of bitplanes corresponding to the layers. Therefore Sodagar teaches layers (wavelet coefficients corresponding to the different bands) which include a subset of bitplanes (bitstreams) from a first band and subset of bitplanes from a second band as claimed.

(Office Action dated 08/23/06, p. 2, ¶2) (emphasis added).

Sodagar discloses coding wavelet coefficients of the bands and putting the coded coefficients into a bitstream. (Sodagar, col. 18, lines 31-32). The wavelet coefficients of the lowest resolution bands are coded prior to coding wavelet coefficients of the next higher resolution bands. (Sodagar, col. 18, lines 28-30). Each resolution occupies a specific segment of the bitstream. (Sodagar, col. 18, lines 36-37). For example, as shown in Sodagar's Figures 17 and 21, the wavelet coefficients of the LL3 resolution band are coded and occupy bit stream portion 1, while the wavelet coefficients of the HH1 resolution band are coded and occupy bit stream portion 10.

Thus, Sodagar discloses that a particular band (e.g., LL3 resolution band) occupies a particular bit stream portion (e.g., bit stream portion 1). Sodagar therefore teaches away from "a layer from the plurality of layers includes a subset of bitplanes from a first band from the separate bands and a subset of bitplanes from a second band from the separate bands," as recited in claim 1.

Further, as acknowledged by the Examiner, Taniguchi fails to teach or suggest this limitation. (Office Action dated 08/23/06, p. 3). As neither Taniguchi nor Sodagar teaches each and every limitation of claim 1, the combination cannot be interpreted to render obvious claim 1 and associated dependent claims 2-13, 17-22, 28-35, and 57-59.

#### Claims 14-16

The Examiner rejected claims 14-16 as being unpatentable over Taniguchi in view of Sodagar in further view of U.S. Patent No. 5,761,655 to Hoffman.

Hoffman discloses a system that creates, stores, retrieves and displays thumbnail images. (Hoffman, Abstract.) Hoffman does not teach or suggest transforming each of the planes into separate bands at all. Therefore, whether considered separately or in combination with Taniguchi and Sodagar, Hoffman fails to teach or suggest a method including organizing bands into a plurality of layers, wherein

a layer includes “**a subset of bitplanes from a first band** from the separate bands **and a subset of bitplanes from a second band** from the separate bands as recited in claim 1. Claims 14-16 include these limitations by virtue of being dependent on claim 1. Therefore, claims 14-16 are patentable over the combination of Hoffman, Taniguchi, and Sodagar.

#### Claims 23 and 24

Examiner rejected claims 23 and 24 as being unpatentable over Taniguchi in view of Sodagar and in further view of U.S. Patent No. 5,880,856 to Ferriere.

Ferriere discloses a method of storing and of progressively transferring a still image so that it can be conveniently previewed during the transfer and so that a user can terminate the transfer at an early stage if the image turns out to be undesirable. (Ferriere, Abstract.) Ferriere does not teach or suggest organizing bands into a plurality of layers. Therefore, Ferriere, whether considered separately or in combination with Taniguchi and Sodagar, fails to disclose or suggest a method including organizing bands into a plurality of layers, wherein a layer includes “**a subset of bitplanes from a first band** from the separate bands **and a subset of bitplanes from a second band** from the separate bands, as recited in claim 1. Claims 23 and 24 include these limitations by virtue of being dependent on claim 1. Therefore, claims 23 and 24 are patentable over the combination of Ferriere, Taniguchi, and Sodagar.

#### Claims 25-27

Examiner rejected claims 25-27 as being unpatentable over Taniguchi, Sodagar, Ferriere and in further view of U.S. Patent No. 6,615,224 to Davis.

Davis discloses a method for deleting files on a UNIX file system, so that they may subsequently be undeleted, without any possibility of loss or damage. (Davis, Abstract.) Davis does not teach or suggest the use of bitplanes or organizing bands into layers. Therefore, Davis, whether considered separately or in combination with Taniguchi, Sodagar, and Ferriere, fail to disclose or suggest a method including “transforming each of the planes into separate bands, based on frequency information present in each plane, **wherein the separate bands include a first band with a first number of bitplanes**” and “**organizing the bands into a plurality of layers suitable for progressive transmission to a target device, wherein a layer includes a subset of the bitplanes of the first band,**” as recited in claim 1. Claims 25-27 include these limitations by virtue of being dependent on claim 1. Therefore, claims 25-27 are patentable over the combination of Davis, Taniguchi, Sodagar, and Ferriere.

#### Claims 36-46

Examiner rejected claims 36-46 as being unpatentable over Taniguchi, Sodagar and in further view of Davis.

Claim 36 recites “partitioning said image information at the source device into a plurality of layers, based on resolution and quality criteria, **wherein a layer from the plurality of layers includes a subset of bitplanes from a first band** from the plurality of bands **and a subset of bitplanes from a second band** from the plurality of bands.”

As discussed with respect to claim 1, the combination of Sodagar and Taniguchi fails to disclose or suggest these features. Davis is not concerned with transforming or partitioning image information. Thus, the combination of Taniguchi, Sodagar, and Davis fails to disclose or suggest the features of claim 36. Claims 37-46 include these limitations by virtue of being dependent on claim 36. Therefore, claim 36 and its

dependent claims 37-46 are patentable over the combination of Taniguchi, Sodagar, and Davis.

**Claims 47, 49, 51, 52**

Examiner rejected claims 47, 49, 51 and 52 as being unpatentable over Taniguchi, Ferriere in view of Sodagar and in further view of Davis.

Claim 47 recites “**wherein a layer from the successive layers includes a subset of the bitplanes from a first band from the frequency bands and a subset of bitplanes from a second band from the frequency bands.**” As discussed above, Taniguchi, Sodagar, Ferriere, and Davis fail to disclose or suggest this feature, whether considered separately or in the combination. Therefore, claim 47 and its dependent claims 49, 51, and 52 are patentable over the combination of Taniguchi, Sodagar, Ferriere, and Davis.

**Claim 48**

Examiner rejected claim 48 as being unpatentable over Taniguchi, Ferriere and Davis in view of Hoffman.

Claim 48 includes the feature of “**wherein a layer from the successive layers includes a subset of the bitplanes from a first band from the frequency bands and a subset of bitplanes from the second band from the frequency bands**” by virtue of being dependent on claim 47. As discussed above in reference to claims 14-16 and 23-24, Taniguchi, Ferriere, Davis, and Hoffman fail to disclose or suggest this feature, whether considered separately or in the combination. Therefore, claim 48 is patentable over the combination of Taniguchi, Ferriere, Davis, and Hoffman.

### Claim 50

Examiner rejected claim 50 as being unpatentable over Taniguchi, Ferriere and Davis in view of U.S. Publication No. 2001/0049693 to Pratt.

Claim 50 includes the feature of “**wherein a layer from the successive layers includes a subset of the bitplanes from a first band** from the frequency bands and **a subset of bitplanes from a second band** from the frequency bands” by virtue of being dependent on claim 47. As discussed above in reference to claim 50, Taniguchi, Ferriere, and Davis fail to disclose or suggest this feature, whether considered separately or in the combination. Pratt is directed at an automated data processing system (Pratt, Abstract) and is not concerned with bands or layers representing image data. Thus, claim 50 is patentable over the combination of Taniguchi, Ferriere, Davis, and Pratt.

### Claims 53-55

Examiner rejected claims 53-55 as being unpatentable over Taniguchi in view of Sodagar.

Claim 53 recites “a logic to partition the image data into a plurality of layers, wherein each of the plurality layers includes information that permits rendering of the entire image, the plurality of layers being additive to render the image at increasingly better qualities and wherein **a layer from the plurality of layers includes a subset of bitplanes from a first band and a subset of bitplanes from a second band.**” Thus, claim 53 and its dependent claims 54-55 are patentable over the combination of Taniguchi and Sodagar for at least the reasons articulated with respect to claim 1.

### Claim 56

Examiner rejected claim 56 as being unpatentable over Taniguchi, Sodagar and Ferriere in view of Davis.

Claim 56 recites "wherein a layer from the plurality of layers includes a subset of bitplanes from a first band and a subset of bitplanes from a second band" by virtue of being dependent on claim 53. As discussed above in reference to claim 47, Taniguchi, Sodagar, Ferriere, and Davis fail to disclose or suggest this feature, whether considered separately or in the combination. Therefore, claim 56 is patentable over the combination of Taniguchi, Sodagar, Ferriere, and Davis.

### **Conclusion**

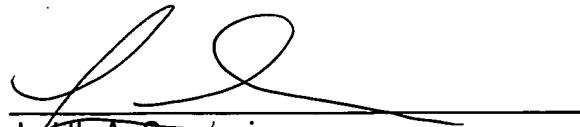
In view of the foregoing remarks, Applicants respectfully submit that all pending claims are in condition for allowance. Such allowance is respectfully requested.

If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to contact Judith A. Szepesi at (408) 720-8300.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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Judith A. Szepesi  
Reg. No. 39,393

12400 Wilshire Blvd.  
Seventh Floor  
Los Angeles, CA 90025  
(408) 720-8300